Annual Performance Report

Environmental Cooperative Agreement

Pleasant Prairie Power Plant

Pleasant Prairie, Wisconsin

We Energies

December 2004

Table of Contents

SUMMARY

We Energies signed Wisconsin's first voluntary Environmental Cooperative Agreement in February 2001. This agreement is specific to Pleasant Prairie Power Plant (P4) located in the Village of Pleasant Prairie, Kenosha County, Wisconsin.

According to the agreement, We Energies committed to providing a periodic performance report detailing both measurable environmental performance improvements and progress towards the specific goals of the P4 Environmental Cooperative Agreement. The content of the performance report is outlined in Section XIV of the agreement.[1] The annual performance report is to be in general alignment with the Global Reporting Initiative's (GRI) reporting guidelines and present at least three years of environmental performance data.

INTRODUCTION

Wisconsin Electric Power Company (conducting business as We Energies) signed a voluntary Environmental Cooperative Agreement with the Wisconsin Department of Natural Resources (DNR) in February 2001. The agreement is specific to the Pleasant Prairie Power Plant located in Kenosha County, Wisconsin. This is a five year agreement and may be renewed for an additional five years.[2]

GOALS AND OBJECTIVES

The overall goal of the P4 Environmental Cooperative Agreement is to provide "an alternative method for the regulation of the environmental impacts." Within this overall goal are several specific objectives, including:

- Baseline and periodic performance evaluations, including an examination of regulatory compliance
- Implementation of a formal environmental management system (EMS)
- Commitment to measurable superior environmental performance
- Informing and involving an interested persons group
- Periodic reporting of environmental performance (i.e., this report) and progress in implementing the agreement
- Operational flexibility, specifically focusing on;
  - Alternative monitoring and enhanced corrective action
  - Reduced reporting and decreased administrative expense
  - Permit streamlining
  - Coal combustion waste materials utilization.

Progress towards these objectives are discussed in the remainder of the report.

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[1] In addition to this report, Wisconsin Energy Corporation provides a comprehensive corporate performance report following the Global Reporting Initiative (GRI) sustainability reporting guidelines for economic, social and environmental metrics. The most recent Wisconsin Energy Corporation report can be found on the internet at *www.wec-performancereport.com*. Additional information regarding the GRI guidelines can be found on the internet at *www.globalreporting.org*.

[2] We Energies signed a second Environmental Cooperative Agreement encompassing all of its Wisconsin fossil-fueled generating plants in September 2002. Pleasant Prairie Power Plant is also included in this second Agreement.

PERFORMANCE EVALUATION

Section XIV of the agreement requires that We Energies annually perform and report to the DNR the results of a baseline performance evaluation. This is defined in section II.G of the agreement as:

> "A systematic, documented and objective review, conducted by or on behalf of the owner or operator of a facility, of the environmental performance of the facility, including an evaluation of compliance with the cooperative agreement and the provisions of Chapters 280 to 295 Wis. Stats. and rules promulgated under those chapters for which a variance is not granted under section 299.80(4) Wis. Stats."

The most recent environmental evaluation of P4 was conducted during April 2004. A copy of the evaluation results and confirmation of any necessary corrective actions were provided to the DNR within 45 days of issuing the final audit report. All corrective actions were completed within 90 days of the evaluation.

The evaluation was conducted by We Energies' compliance management staff. This compliance group is independent of the business unit that operates the plants and reports directly to the Vice President-Environmental for Wisconsin Energy Corporation. The performance review followed the procedures outlined in the ASTM Standard E2107-00 (Standard Practice for Environmental Regulatory Compliance Audits). The ASTM standard addresses facility and auditor responsibilities, auditor qualifications, audit processes, records management and audit report preparation. The 2004 evaluation was comprised of interviews, records reviews and physical inspections of the facility.

ENVIRONMENTAL MANAGEMENT SYSTEMS

We Energies committed to implementation of a formal environmental management system (EMS) based on the ISO 14001 standard as part of the P4 Environmental Cooperative Agreement. The key components of an EMS are outlined below.

Principle EMS Components
Environmental Policy
Environmental Planning
Environmental Aspects
Legal and Other Requirements
Objectives and Targets
Environmental Management Programs
Implementation and Operation
Structure and Responsibility
Training and Awareness
Communication
EMS Documentation
Document Control
Operational Control
Emergency Preparedness and Response
Checking and Corrective Action
Monitoring and Measurement
Nonconformance and Corrective and Preventive Action
Records
EMS Audit
Management Review

Primary responsibility for maintaining the EMS resides with the P4 Cooperative Agreement System Team, or CAST. Specific EMS activity highlights of the CAST and staff at P4 during the reporting period include the following.

EMS Activity	
Training	Targeted environmental training continued. Training courses addressing air, water, and solid waste and similar topics were presented to individual work groups according to job responsibilities and the potential for having an effect on plant environmental performance. An updated environmental refresher training course is being prepared for introduction to the plant in early 2005.
Solid Waste Guidance	The P4 CAST updated the plant's previously prepared Solid Waste Guide covering all identified solid waste streams in the plant. The Guide provides information on the proper storage, labeling, disposal and transport of any solid waste streams collected for recycling or disposal. This information is posted in the plant and updated periodically to reflect any changes in materials, practices or regulatory requirements.
Contractor Reviews	With the initiation of the $325 million P4 Air Quality Control System (AQCS) construction project installing a second selective catalytic reduction (SCR) unit and two flue gas desulfurization (FGD) units, several contractors and subcontractors are operating at the plant site. To assure compliance with applicable environmental regulations, the company is communicating environmental expectations and confirming performance by performing periodic environmental compliance audits of contractors. Any follow up actions are tracked to closure.
On Site Inspections	To support environmental compliance and best practices, the P4 CAST continued periodic on-site inspections of various systems at the plant. These complement the annual performance reviews and increase the overall environmental awareness of plant operating staff. Where necessary, corrective action is taken, and changes in procedures are recommended if appropriate.
Employee Information	The P4 CAST provided input to initiatives to make additional environmental guidance available to plant staff via the company's intranet site. An inspection guidance document was also prepared for plant use.
Communications	The P4 CAST has continued to lead the plant's communication and coordination with interested stakeholders. During the past year this has included hosting two open houses, plus preparing informational material contained in external mailings and an internal employee newsletter.

Additional information regarding P4's EMS is located at on the internet at *www.we-energies.com/environment/p4eca.*

RESEARCH

We Energies continues to support and conduct research on mercury measurement and removal. This research consists of studies conducted at We Energies' facilities and funded collaborative research with the Electric Power Research Institute (EPRI), the U.S. Department of Energy (DOE), and the U.S. Environmental Protection Agency (EPA).

Previous mercury research supported by the company focused on detecting and measuring the various forms of mercury in plant emissions and the environment. More recent research has examined potential mercury emission reduction strategies, including both co-control of mercury by existing air pollution control devices and mercury-specific control technologies. We Energies currently is supporting both approaches to reducing mercury emissions.

Co-Control Mercury Removal Technologies
During 2003, We Energies worked with EPRI and DOE in performing a detailed evaluation of the newly installed selective catalytic reduction (SCR) unit for nitrogen oxides reduction at P4. The goal of the study was to determine the degree to which the SCR oxidized the elemental mercury present in the flue gases. Results of the study indicated that at power plants burning low sulfur western coal (and particularly sub-bituminous coal), operation of a SCR does not contribute significantly to the collection or co-control of oxidized mercury by wet scrubbers.

Mercury-Specific Removal Technologies
We Energies continues to support EPRI and DOE research that targets the direct removal of mercury from power plant emissions. Two specific projects are being supported or explored by the company.

> **Carbon-Based Sorbent Injection** – We Energies' Pleasant Prairie Power Plant participated in a DOE and EPRI funded project to determine the feasibility and effectiveness of carbon-based sorbents that are injected into the plant flue gases upstream of the particulate control devices. P4 was one of four power plants initially examined; however, DOE plans to perform similar tests at six additional plants during the next year. Results of testing at P4 indicated that 60-70 percent of the mercury was removed from the flue gas, although mercury removal performance is impacted significantly by the gas chemistry specific to low sulfur coal. However, the presence of the carbon-based sorbent in the fly ash adversely impacts the marketability of this product for beneficial use by the cement and other industries.
>
> **Gold Panel Collection** – We Energies provided P4 as a host site during 2002 and 2003 for EPRI-sponsored research wherein mercury was captured using stationary gold panels mounted within the plant's electrostatic precipitator (ESP) ductwork. Gold and a limited number of other substances have been demonstrated to capture mercury in small test apparatuses. The initial research at P4 examined the feasibility of using stationary, large scale gold traps from which captured mercury can be periodically recovered. EPRI's research on this technology continues.

We Energies is continuing to both conduct research and implement mercury control technologies at P4 and other coal-fueled power plants operated by the company. We Energies is committed to a significant overall reduction in mercury emissions from the plants as part of the voluntary Multi-Emission Cooperative Agreement (MECA) signed with the DNR in September 2002. This second and broader Cooperative Agreement by We Energies includes a ten percent mercury reduction target by 2008, and a fifty percent reduction target by 2013.

Additional information on We Energies' mercury research can be found on the internet at *www.we-energies.com/environment/mercury*.

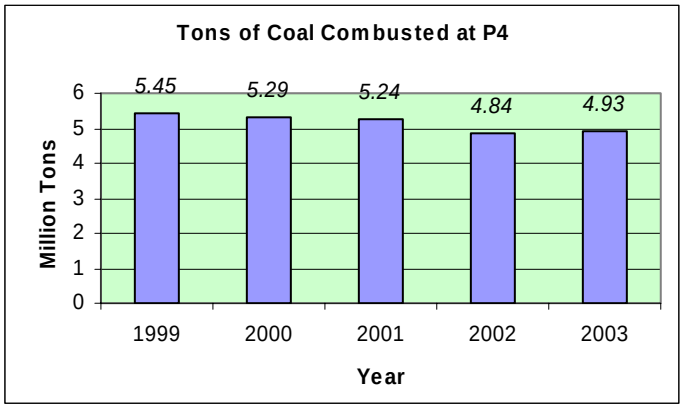
ENVIRONMENTAL PERFORMANCE

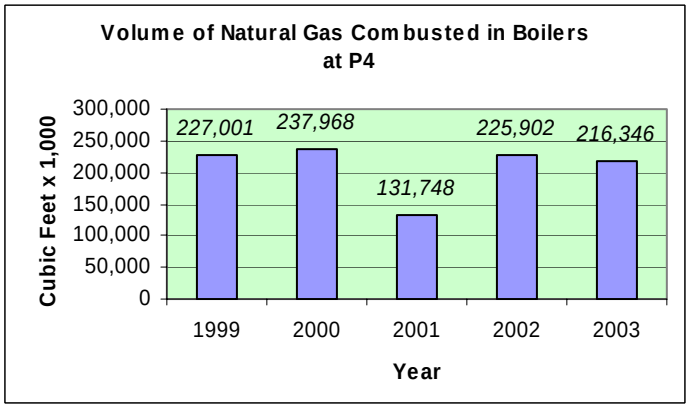
One of the primary objectives of the P4 Environmental Cooperative Agreement was to provide measurable improvements in environmental performance at the plant. The following section provides summary data for the plant in accordance with Section XIV of the agreement.

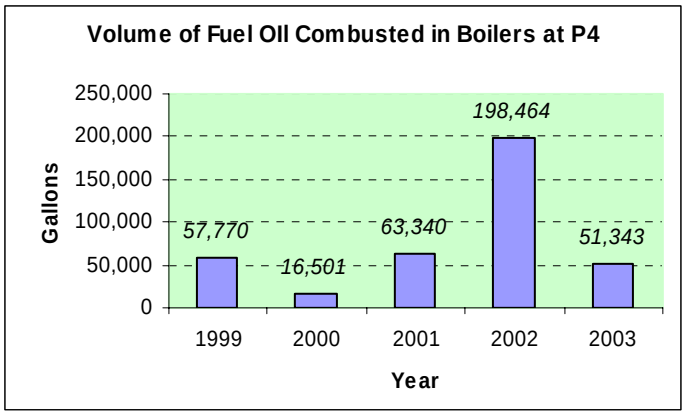
Fuel Use

Pleasant Prairie Power Plant utilizes three fuels: coal, fuel oil, and natural gas. Coal is the primary fuel, while either fuel oil or natural gas is utilized during plant start up and for initial flame stabilization when coal is first introduced to the boilers.

The following diagrams illustrate the amount of these three fuels utilized at P4 during the past five years.





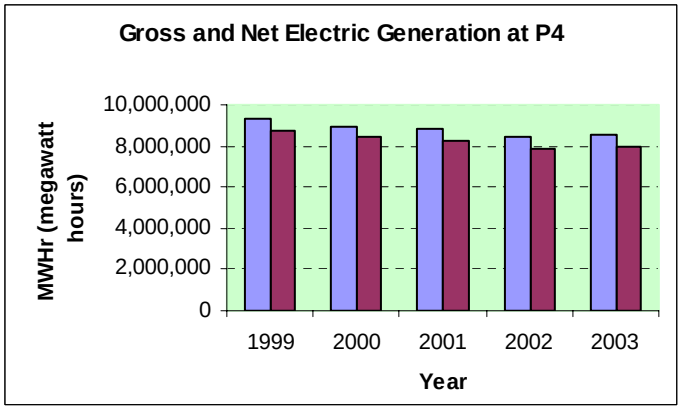


The higher use of fuel oil in 2002 represents action by the plant to reduce the volume of oil in storage in conjunction with routine integrity testing and maintenance of the plant's fuel oil storage system.

Generation

Total electrical generation by the We Energies' plants, including P4, is a function of economic conditions and weather, and the availability of individual generating units.

Overall generation by P4 was slightly reduced during 2002 and 2003 due to the installation of the SCR and other construction activities at the plant. Initiation in constructing a second SCR and the two FGD units during 2004 will continue to increase the number and length of plant outages, potentially further reducing total generation.



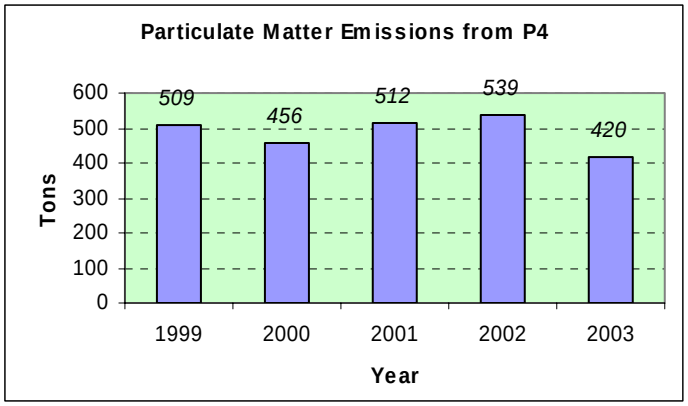
Gross generation represents the total amount of electrical energy produced by the plant. The net generation value represents the amount of electrical energy available for transmission to customers after internal electrical use by the plant (e.g., motors for pumps and fans, power for the electrostatic precipitator, etc.).

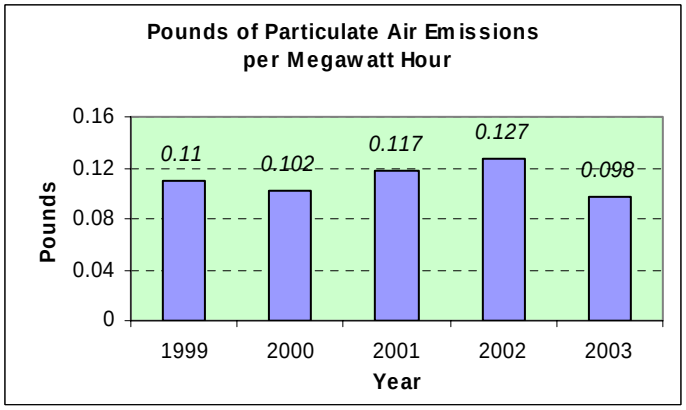
Particulate Matter Air Emissions

Particulate matter air emissions from P4 are a function of the total amount of coal combusted by the plant and the efficiency of the air emission control systems in removing particulate matter. The allowable level

of particulate matter emitted by the plant stack is limited by the air quality permit issued by the Wisconsin DNR. During the most recent compliance testing, the plant's average particulate emission rate was approximately 15 percent of the regulatory limit.

The total mass and rate of particulate emissions by the plant during the past five years is illustrated in the figures below. Emissions during the past full reporting year indicate a decrease in particulate emissions. This may be a reflection of two factors. First, during 2003 the number of outages decreased slightly. Start-up and shutdown periods associated with each outage take several hours, during which time the ESP particulate removal efficiency is lower than normal operating conditions. Some of the start-up and shutdown events were associated with the installation and start-up of the SCR unit installed during 2002 and initially operated during 2003. The other factor contributing of lower particulate emissions may be a reflection of improved functioning of the electrical control systems operating the ESP that were updated during 2002.

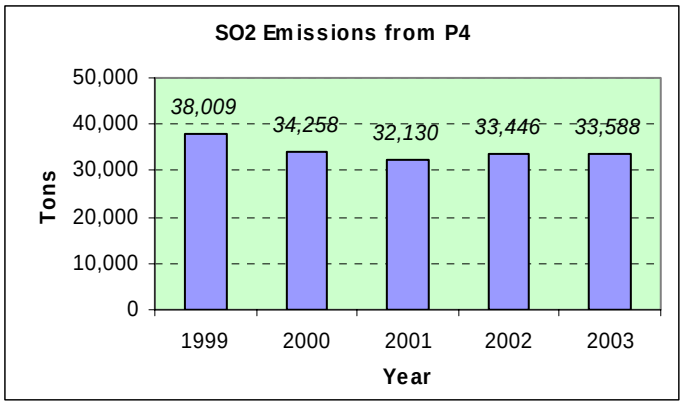


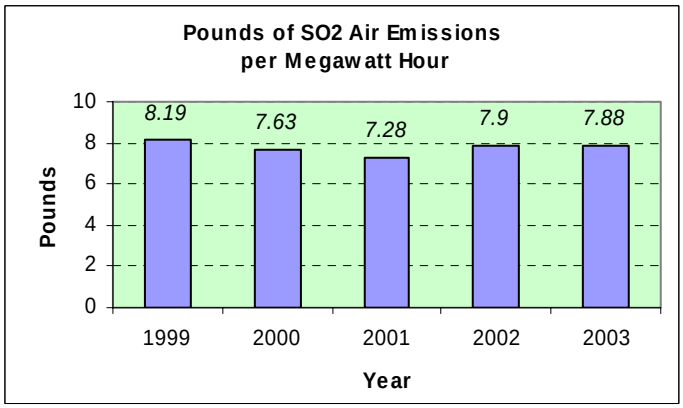


Installation of the FGD, which is slated for operation after 2007, is expected to further reduce the particulate emissions from the plant.

Sulfur Dioxide Air Emissions

The current rate of sulfur dioxide (SO_2) emissions from P4 are a direct function of the percent sulfur in the coal. Pleasant Prairie Power Plant burns a low sulfur coal from the Powder River basin in eastern Wyoming. The following graphics illustrate the sulfur dioxide emissions from the plant.



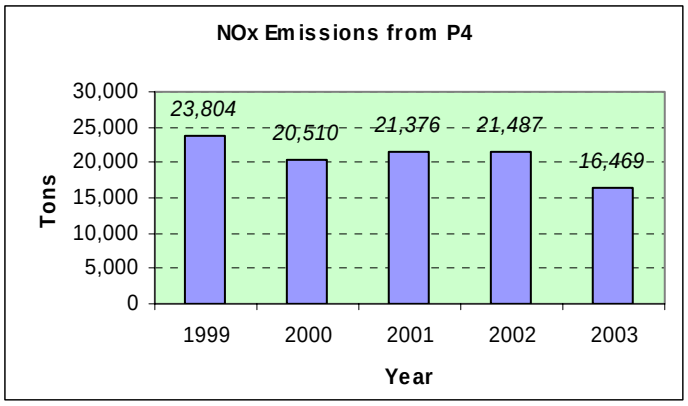


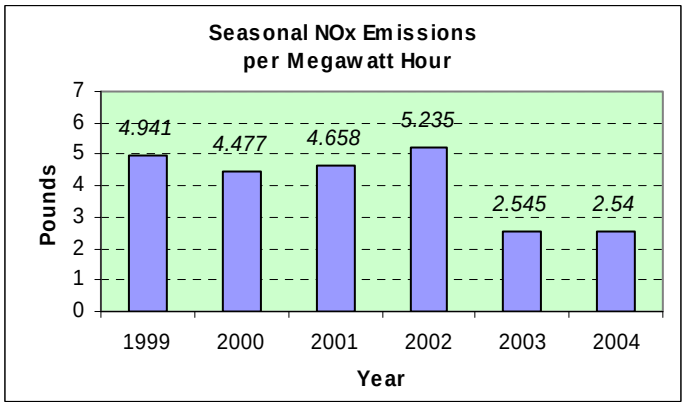
We Energies broke ground in May 2004 for two flue gas desulfurization (FGD) units to be installed in both Units 1 and 2. This is one component of the $325 million Air Quality Control Systems (AQCS) project currently under construction at the plant. These systems will remove a significant fraction of the SO_2 in the flue gas, thereby reducing these emissions from P4. Initial testing and operation of the FGD units is scheduled for 2007.

Nitrogen Oxide Air Emissions

Wisconsin's first selective catalytic reduction (SCR) unit became fully operational in 2003. This $80 million investment was installed to specifically reduce NOx emissions. First operation of the SCR occurred during the 2003 summer ozone season, and had a significant impact on plant NOx emissions. This NOx emission reduction, beginning in 2003, is illustrated in the graphs below. Seasonal NOx emissions during the summer ozone season have been reduced by approximately 50 percent. Staff are currently monitoring the long-term efficiency of the catalyst as the SCR is now continuously utilized whenever the plant is operated. The installation of another layer of catalyst material is tentatively scheduled for 2005 to assure optimal efficiency of the system.

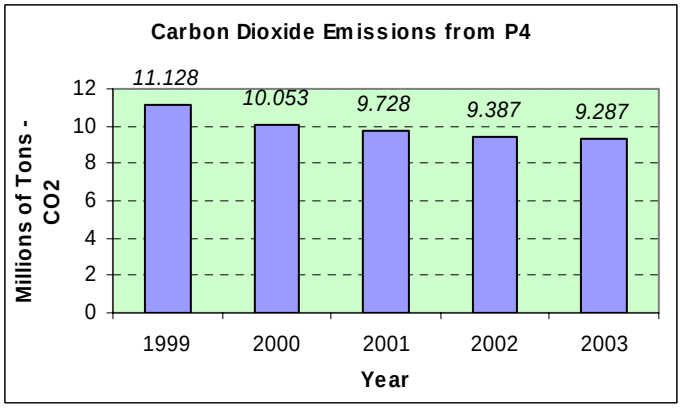
A second SCR is currently being installed in Unit 1 and will further reduce NOx emissions from the plant when it is operational in 2007.

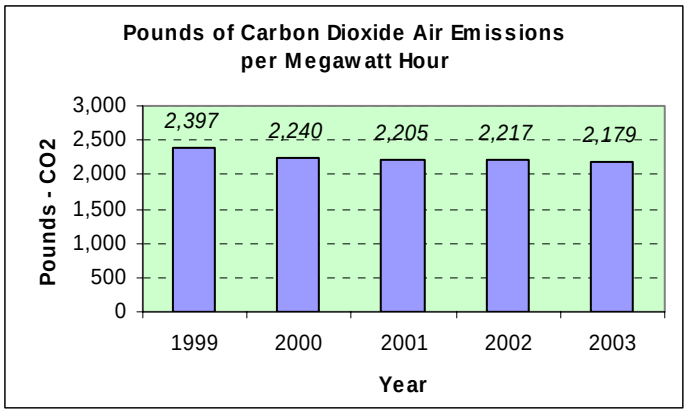




Carbon Dioxide Air Emissions

We Energies' carbon dioxide, or greenhouse gas (GHG) emissions rate (lb/MWH) fluctuates from year to year depending on the demand for electricity by customers, the amounts and types of fuel burned, and the efficiency of individual generating units. We Energies is continually seeking performance improvements that increase this efficiency. On a system-wide basis, the company is increasing the amount of renewable energy in its portfolio, thereby reducing the percent of fossil fuels utilized by electric customers.

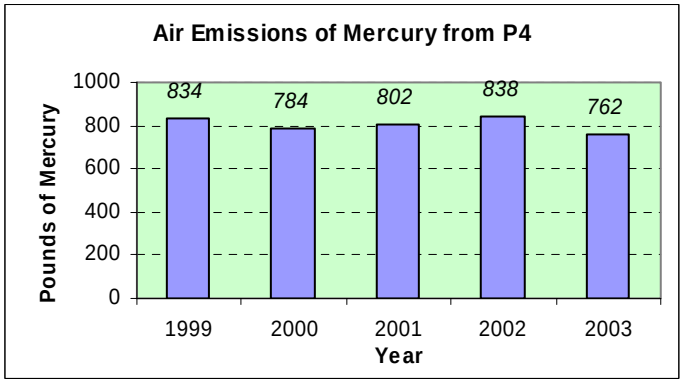




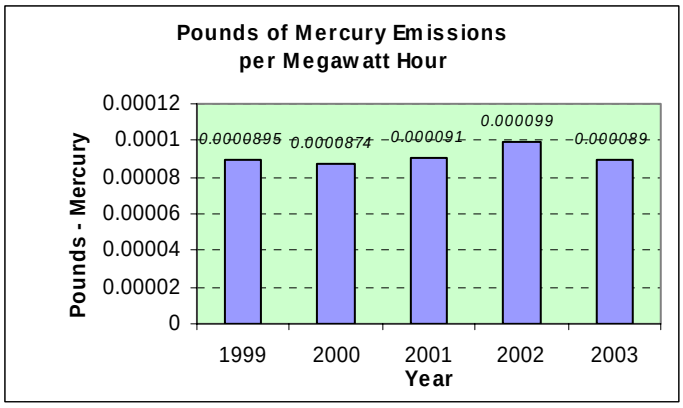
Mercury Air Emissions

Mercury is a trace constituent in coal. Air emissions of mercury from P4 are a function of both the mercury concentration in the coal and fraction of mercury that is not entrained in the coal combustion products consisting of bottom and fly ash. As indicated in the Research section of this report, We Energies is making significant research investments to more accurately measure mercury and to develop new mercury control technologies.

Currently there are no mercury emission limits for P4 or other power plants in Wisconsin. The DNR and the EPA are both proposing regulatory actions that would require reductions in the future. In 2002, as part of its voluntary Multi-Emission Cooperative Agreement, We Energies committed to a significant overall reduction of mercury emissions from its coal-fueled power plant system.[3] This included a ten percent reduction target by 2008, and a fifty percent reduction target by 2013.



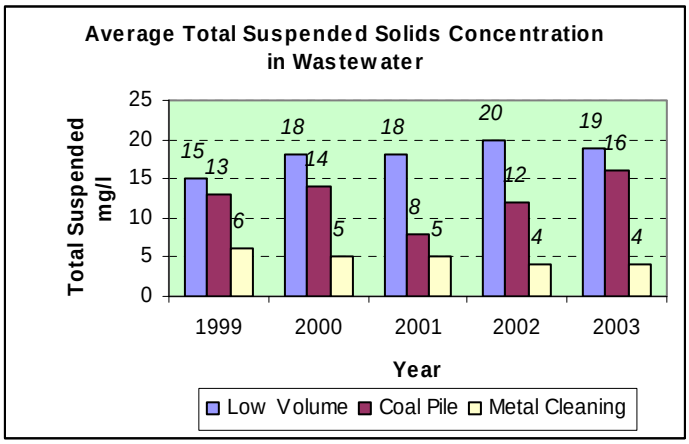
[3] In 2004, We Energies started construction of a $50 million full-scale demonstration project using the TOXECON mercury removal technology at the company's Presque Isle Power Plant located in Marquette, Michigan. This first-of-a-kind system will provide actual operating experience of a full-scale mercury removal system. Results from this project will be shared with the DOE, EPRI and other utilities.

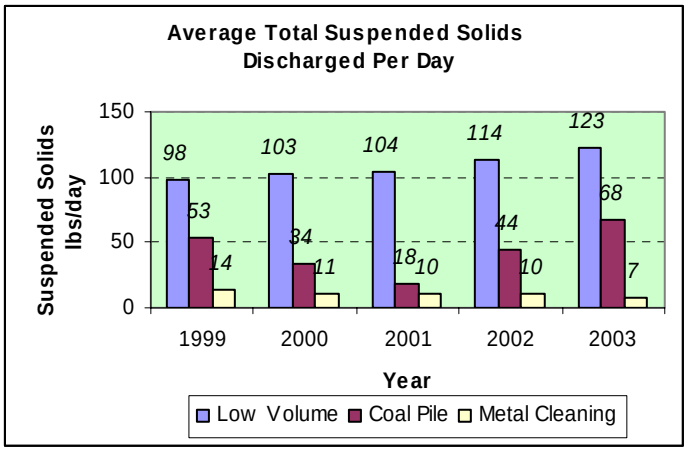


Total Suspended Solids in Waste Water Discharges

Due to the large quantities of coal and ash products handled by the plant, there is the potential for suspended solids in untreated wastewater and stormwater runoff from the plant. Consequently, the plant's wastewater discharge permit requires that the plant treat wastewaters from the plant and that the wastewaters discharged from the plant are within certain limits. In order to minimize the discharge of suspended solids, the low volume, metal cleaning, and coal pile runoff basins are used to promote the initial settling out of these fine grain materials. This settling process is followed by any necessary treatment in the plant's wastewater clarifier system that uses flocculents to aggregate and further remove suspended solids.

The plant's wastewater treatment permit limits total suspended solids concentrations to 100 mg/l (milligrams per liter) on a daily basis and 30 mg/l on a monthly average basis. The following diagrams illustrate average suspended solids concentrations and mass discharge from the three basins regulated by the wastewater permit. Average suspended solids concentrations are significantly below the levels allowed in the wastewater permit issued by the DNR.

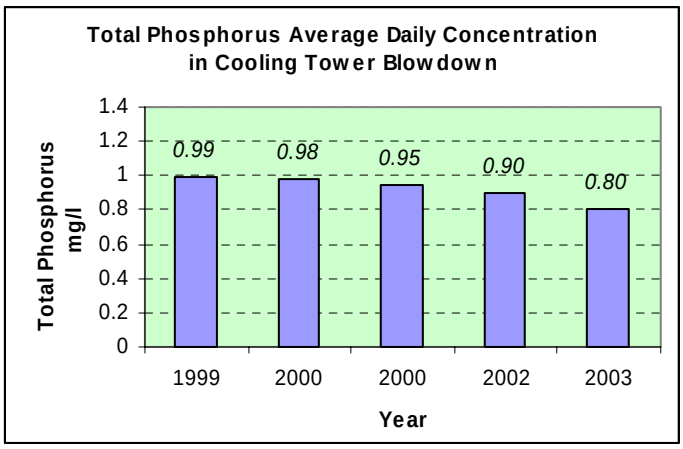




Total Phosphorus in Water Discharges

The largest single water discharge from P4 is the cooling water blowdown from the two mechanical draft cooling towers located north of the power plant building. The majority of the water pumped from Lake Michigan is routed to the cooling water system. Some minor levels of chemical additives are mixed with the cooling water to prevent the growth of algae and other organisms, as well as to prevent corrosion. These additives may include both phosphorus and chlorine. A fraction of the cooling water, or cooling tower blowdown, is routed back to Lake Michigan. Two parameters of special interest in this cooling water blowdown are phosphorus and residual chlorine.

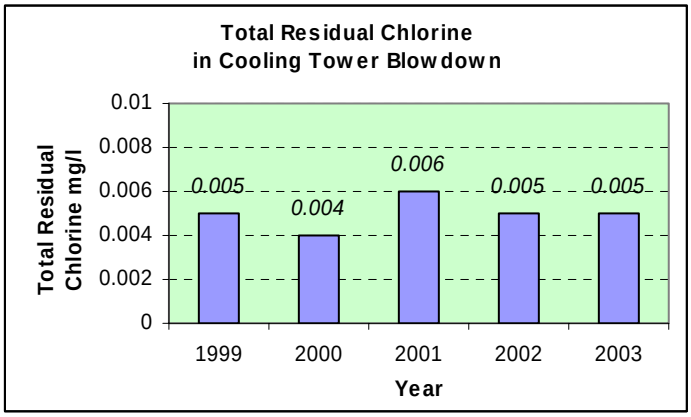
The graph below illustrates the phosphorus concentration in the cooling water blowdown. A significant fraction of the phosphorus concentration in the discharge reflects the background level of phosphorus present in the water when it is withdrawn from Lake Michigan. The process of utilizing the water in the cooling towers (i.e. evaporation) also concentrates this nutrient. The plant was in compliance with the phosphorus limit throughout 2003 and to date in 2004.



Total Residual Chlorine in Water Discharges

Chlorination of the plant cooling waters is necessary to limit the growth of algae and other biological growths which can limit the thermal efficiency of the cooling towers, and consequently the plant's overall

efficiency. The plant's wastewater discharge permit limits the concentration of residual chlorine in the cooling water blowdown discharged to Lake Michigan. The following graph illustrates the residual chlorine content in the cooling water blowdown. The plant was in compliance with this limit throughout 2003 and to date in 2004.

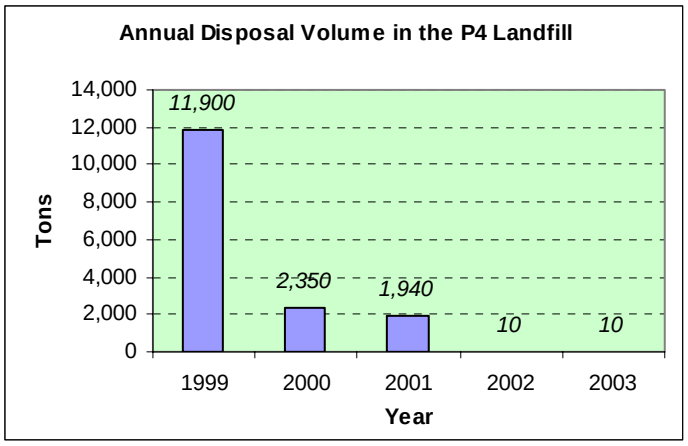


Beneficial Use of Coal Combustion Products

The plant maintains a voluntary goal of beneficially utilizing 100 percent of the coal combustion products (i.e., fly ahs and bottom ash) produced in an effort to minimize the landfilling of these materials. In 2003, 100 percent of these materials were utilized with approximately 71 percent of the fly ash produced at P4 used in the manufacture of concrete and concrete products. In this use, the fly ash replaces the need for some of the Portland cement in the concrete. The remaining 29 percent of the fly ash produced was used as a waste stabilization product and as a sub-base stabilizing soft soils under paved parking lots and roads. Nearly 100 percent of the bottom ash produced in 2003 was used as a base material under concrete slabs and pavement. The bottom ash replaces the need for sand and gravel at construction sites.

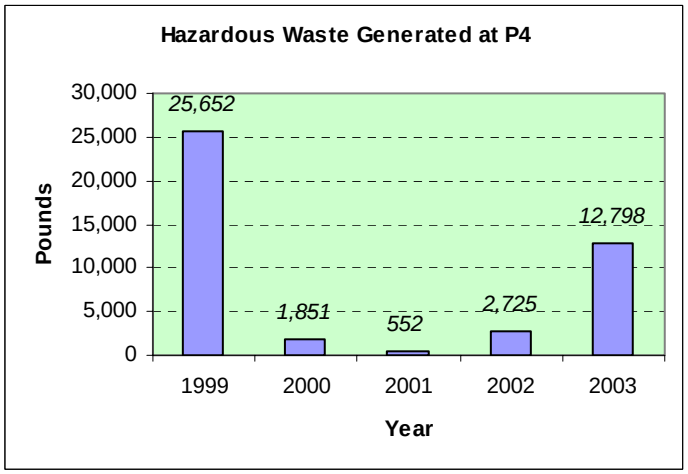
Ash Disposal Volumes in Landfills

One of the direct consequences of the beneficial use of P4's coal combustion products is the decreased need for landfilling materials. As illustrated in the following graphic, the total amount of material placed in the landfill has decreased significantly. The only material currently placed in the landfill are de minimis amounts of ash and sludge material that can not be beneficially used. During the past two years this has averaged approximately ten tons per year.



Hazardous Waste Generation

A key pollution prevention goal of the plant is to minimize the production of hazardous waste that must be shipped off site for treatment or disposal. To date the plant has been successful in identifying opportunities to reduce, reuse or recycle material, thus avoiding the generation of all types of solid waste, including that characterized as hazardous. However, due to construction activities at the plant, there is an increased potential for the generation of waste paint material removed from plant surfaces, used solvents and other materials associated with the major air quality improvement projects describe above. During 2003, key hazardous wastes included lead paint debris and tank sludge materials associated with maintenance and construction activities. We Energies and plant staff are also continuing to work with contractors to establish and follow pollution prevention practices while operating on the plant site.



Toxic Release Inventory (TRI) Releases

The Toxics Release Inventory (TRI) was created by the EPA to help communities encourage industries to voluntarily reduce those emissions designated by the agency as “toxic” substances. Created as part of the Emergency Planning and Community Right-to-Know Act of 1986 and administered by the EPA, the TRI is a public record of the release and transfer of designated chemicals by private companies and government facilities.

We Energies annually reports to the EPA the TRI emissions by P4 to land, air and water. Detailed TRI data for P4 (and other We Energies power plants) is published on the internet at *www.we-energies.com/environment/tri*.

Paper, Cardboard and Metal Recycling

The P4 staff continue to collect and recycle paper and cardboard products and scrap metal, as well as seeking to reduce the total amount of these materials used at the plant. The total volume of cardboard and other packaging material generated by the plant is dependent in part on outage and construction projects, including the activities and practices of contractors and suppliers. Similarly, scrap metal production increases with construction projects. The total volume of scrap metal sold for recycling is expected to significantly increase during the AQCS project outlined above.

REGULATORY FLEXIBILITY

Section XII of the P4 cooperative agreement provides a mechanism for We Energies and the DNR to exercise certain operational flexibility and streamlining in recognition of annual reviews and reporting, implementation of environmental management systems and other commitments of the agreement.

Permit Streamlining

We Energies utilized this provision once during 2002 and once in 2003. This provision has not been utilized in 2004.

Streamlined Data Collection and Reporting

We Energies staff continue to utilize several provisions of the cooperative agreement that allow for streamlined data collection and reporting. These include the following.

- Electrostatic precipitator monitoring and data collection, combined with enhanced corrective action
- Instrument calibration based on good engineering practices
- Baghouse collector data inspection and data collection
- Semi-annual excess emission reporting
- Annual wastewater discharge monitoring report summaries.

The cooperative agreement contains provisions for We Energies to submit quarterly excess emission and Title V semi-annual and annual reports to the DNR and EPA electronically within 45 days after the end of each reporting period. This flexibility has not been exercised because the EPA has not developed the final rule outlining procedures for authenticating electronic signatures. We Energies has continued to monitor a separate pilot project wherein the DNR is examining the feasibility and effectiveness of facilities providing wastewater discharge data electronically to the agency.

ASH FUEL REBURN AND BENEFICIAL USE

We Energies has two patented processes that allow the company to recover energy from ash that would otherwise be managed as a waste. One patent (U.S. Patent # 5,992,336) allows bottom ash and fly ash with a high loss on ignition to be reburned in a pulverized coal furnace such as those at P4.[4] The other patent (U.S. Patent # 6,637,354) allows the company to identify and recover ash products from a previously used disposal site, and where possible, reburn this ash for energy recovery. These processes have been utilized at P4 and provide several environmental benefits. These benefits, based on data projected through the end of 2004, are outlined below.[5]

Total Ash Reburned	390,00 tons
Avoided Coal Use	160,00 tons, or 1,400 rail cars
Avoided Landfill Space	325,000 cubic yards
Potential Avoided CO_2 Emissions	210,000 tons
Fly Ash Produced for Beneficial Use	180,000 tons

We Energies has leveraged this energy recovery experience at another one of its power plants at Marquette, Michigan.

OUTREACH

We Energies and P4 staff continue to provide information and seek feedback from members of Pleasant Prairie and surrounding communities and other interested stakeholders. Development and implementation of the cooperative agreement in 2001 initially heightened the plant's interaction with interested neighbors, regional environmental groups, surrounding businesses and elected and appointed governmental officials. Approximately 70 individuals or groups either stepped forward or were identified by the plant staff as potentially interested parties. To provide information and to stimulate feedback, P4 staff have taken several actions during 2003 and 2004, including:

- Plant information sessions and tours, including an open house in April 2004 highlighting the planned construction of the $325 AQCS project (see the Emissions section above)
- Periodic mailings, including plant environmental newsletters that were introduced in 2003
- Focused outreach to targeted community, governmental and professional groups.

Continued active participation by both community and regional stakeholders has been challenging, and feedback from these parties has been minimal or in some instances nonexistent. To solicit participation in an open house and information session for the April 2004 event focusing on the AQCS project, We Energies mailed over 800 invitation letters and information sheets to neighbors, customers, local businesses and community leaders. In two open house sessions, a total of 20 individuals attended, 17 in the first session and three in the second. At another information meeting during the third quarter of 2004, only one member of the community participated.

[4] High loss on ignition levels in ash indicate that unburned carbon (i.e., energy) is still present in the ash.

[5] This data also appears in a December 2003, U.S. Environmental Protection Agency publication entitled *Ash Fuel Reburn and Beneficiation at We Energies.*

The lack of active participation by stakeholders may be a function of competing time obligations (e.g., personal or professional issues), as well as the fact that the P4 Environmental Cooperative Agreement has the objective of improved environmental performance. As demonstrated by this report, the potential effect of the plant on the environment is being continually reduced.

The plant will continue these and other outreach activities with specific emphasis on the projected air quality improvements scheduled to be installed during the next decade. This construction phase will increase contractor traffic in the area surrounding the plant, and noticeable changes will occur in the overall plant structure as seen from surrounding roads and highways. The erection of a new 450 feet chimney during late 2004 is the most evident visual change at the plant. Because permits and other approvals continue to be required from both the DNR and the Village of Pleasant Prairie, other opportunities for both formal and informal interaction and feedback will continue until the construction activity is completed in 2007.

ADMINISTRATIVE SAVINGS

Measurable administrative savings were one goal of the P4 Environmental Cooperative Agreement. The primary source of these savings is flexibility in monitoring and reporting. The most significant administrative savings realized by both We Energies and the DNR is the construction permit streamlining. This benefit was utilized during 2003. By using the construction permit streamlining provision of the cooperative agreement, no permit is issued requiring the payment of a construction permit fee of $4,500 by the company. We Energies also realized staff labor savings by reduced meetings and other actions associated with routine permit applications and approval by the DNR. These permits are conservatively estimated to require approximately 80 hours of staff time per application.[6] We Energies used the construction permit streamlining provision twice during 2002 and 2003, with savings estimated to be $9,000 in permit fees and $16,000 in staff costs.

The DNR has identified staff labor savings resulting from We Energies' use of the construction permit streamlining. Each construction permit review requires approximately 80 to 100 hours of agency staff time. According to estimates provided by the DNR, utilizing the streamlining provision reduces agency staff time by 70 to 90 hours per permit. Consequently, the DNR realized a staff time savings of approximately 140 to 180 hours since the cooperative agreement was initiated.

PROGRESS ON OTHER COMMITMENTS

The P4 Environmental Cooperative Agreement included several environmental commitments related to superior environmental performance and progress on these commitments is to be included in performance reports. The following table provides a summary of We Energies' performance on these commitments.

[6] Actual We Energies staff time is dependent on agency review time and any required follow up activities.

Coal displaced by recovered ash	Pleasant Prairie Power Plant continued to burn as a fuel, high-carbon fly and bottom ash from the Milwaukee County and Valley Power Plants, as well as material that was previously stockpiled. In 2003, the plant reburned more than 77,400 tons of ash from other plants along with more than 30,500 tons of stockpiled ash. During 2003, the reburning of this ash fuel avoided the purchase of 400 rail car loads of coal, or approximately 46,000 tons of purchased fuel.[7]
Saved or recovered landfill space	The ash reburn process at P4 saved the equivalent of 90,000 cubic yards of landfill space in Wisconsin during 2003. This amount of space would have been required had the high-carbon ash from other power plants not been burned at P4.
Coal ash recovery from landfills for beneficial use	During 2003, We Energies recovered 25,900 tons of coal ash from the P4 landfill and sold it as a base material to replace stone and gravel under roads, parking lots and buildings. This conserves natural resources such as sand, gravel and stone that would otherwise be mined and transported from other locations.
Progress on the environmental management information system (EMIS)	Utilization of the environmental management information system (EMIS) continued at P4, with all air and water permit information entered into this system. This information includes all tasks and activities associated with routine monitoring, recordkeeping, and reporting.
Supplier audits	We Energies continues to perform periodic audits of key suppliers of environmental services (e.g., management of used oil, lighting materials, solid and hazardous waste, antifreeze, etc.). Approximately 25 suppliers are examined on a periodic schedule depending on the type of service provided. The ISO 14001 voluntary environmental management system standard is used as the framework for conducting these audits.
Semi-annual monitoring reports and excess emission summaries	Semi-annual monitoring and excess emission reports are provided to the DNR and EPA under separate cover in accordance to the schedule outlined in the cooperative agreement.
Annual discharge monitoring summary report	An annual wastewater discharge monitoring summary report is provided to the DNR under separate cover in the first quarter of each calendar year. This summary report saves approximately 200 pages of discharge monitoring reports that would otherwise be submitted on a monthly basis to the agency. Plant monitoring of wastewater systems continues in accordance with the permit issued by the DNR.

[7] A more comprehensive discussion on We Energies' recovery and recycling of material is presented in the corporate performance report at *www.wec-performancereport.com.*

Wastewater notifications	The plant is required to notify the DNR and take corrective and preventive action whenever there is a temporary exceedance of the parameters outlined in the plant's wastewater discharge permit. During 2003, the plant reported one day where the total suspended solids (TSS) concentration exceeded 100 mg/l, as well as one incident where the pH level was outside the 6.0-9.0 limits. A total residual chlorine and an iron exceedance were both reported to the DNR during 2004. Corrective and preventive action was taken in all cases.
Construction related to plant emission sources	In May 2004, the plant initiated construction on a $325 million Air Quality Control System project that includes installation of: • A second SCR on Unit 1 to reduce NOx emissions • Two wet flue gas desulfurization units (FGD) systems on Units 1 and 2. This project is also requiring the removal of some existing warehouses and other structures (including the plant stack) east of the main plant. Construction of a new stack was initiated in the third quarter of 2004, and the outer concrete structure has been completed.

Additional Information

Additional information regarding the environmental performance of Pleasant Prairie Power Plant can be obtained by contacting:

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or

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DATA APPENDIX

Energy Use

Tons of Coal Combusted at P4 tons	
1999	5,450,195
2000	5,294,942
2001	5,237,028
2002	4,843,593
2003	4,931,428

Volume of Natural Gas Combusted at P4 cubic feet x 1,000	
1999	227,001
2000	237,968
2001	131,748
2002	225,902
2003	216,346

Volume of Fuel Oil Combusted at P4 Gallons	
1999	57,770
2000	16,501
2001	63,340
2002	198,464
2003	51,343

Gross Generation

Gross and Net Electric Generation at P4 megawatt hours		
	Gross	*Net*
1999	9,282,529	8,709,608
2000	8,974,819	8,398,877
2001	8,820,773	8,234,709
2002	8,469,446	7,898,580
2003	8,524,651	7,935,513

Particulate Matter Emissions

Particulate Matter Emissions from P4 Tons	
1999	509
2000	456
2001	512
2002	539
2003	420

Pounds of Particulate air Emissions per Megawatt Hour pounds	
1999	0.110
2000	0.102
2001	0.117
2002	0.127
2003	0.098

Sulfur Dioxide Emissions

SO2 Emissions from P4 tons	
1999	38,009
2000	34,258
2001	32,130
2002	33,446
2003	33,588

Pounds of Particulate Air Emissions per Megawatt Hour pounds per megawatt hour	
1999	8.18
2000	7.63
2001	7.28
2002	7.90
2003	7.88

Nitrogen Oxide Emissions

NOx Emissions from P4 Tons	
1999	23,687
2000	20,871
2001	21,376
2002	21,487
2003	16,469

Seasonal Nitrogen Oxide Emissions

Seasonal NOx Emissions per Megawatt Hour pounds per megawatt hour	
1999	4.941
2000	4.477
2001	4.658
2002	5.235
2003	2.545
2004	2.54

Carbon Dioxide

Carbon Dioxide Emissions from P4 millions of tons	
1999	11.128
2000	10.053
2001	9.728
2002	9.387
2003	9.287

Pounds of Carbon Dioxide Emissions per Megawatt Hour Pounds	
1999	2,397
2000	2,240
2001	2,205
2002	2,217
2003	2,179

Mercury Emissions

Air Emissions of Mercury from P4 pounds	
1999	834
2000	784
2001	802
2002	838
2003	762

Pounds of Mercury Air Emissions per Megawatt Hour Pounds	
1999	0.0000895
2000	0.0000874
2001	0.0000910
2002	0.0000990
2003	0.0000890

Wastewater Discharges

Average Total Suspended Solids Concentration in Wastewater Discharge mg/l			
	Low Volume	*Coal Pile*	*Metal Cleaning*
1999	15	13	8
2000	18	14	5
2001	18	8	5
2002	20	12	4
2003	19	16	4

Average Total Suspended Solids Discharged per Day lbs/day			
	Low Volume	*Coal Pile*	*Metal Cleaning*
1999	98	53	14
2000	103	34	11
2001	104	18	10
2002	114	44	10
2003	123	68	7

Total Phosphorus Average Daily Concentration in Cooling Water Blowdown mg/l	
1999	0.99
2000	0.98
2001	0.95
2002	0.90
2003	0.80

Total Residual Chlorine in Cooling Tower Blowdown mg/l	
1999	0.005
2000	0.004
2001	0.006
2002	0.005
2003	0.005

Coal Combustion Product Utilization

Coal Combustion Product Utilization tons	
1999	268,000
2000	261,000
2001	287,000
2002	288,000
2003	282,000

Solid Waste

Annual Disposal Volumes in the P4 Landfill tons	
1999	11,900
2000	2,350
2001	1,940
2002	10
2003	10

Hazardous Waste Generated at P4 pounds	
1999	25,652
2000	1,851
2001	552
2002	2,725
2003	12,798